MONTHLY JOURNAL OF
THE MUSHROOM GROWERS'
ASSOCIATION

# MGA
# BULLETIN

AUGUST, 1957 · NUMBER 92

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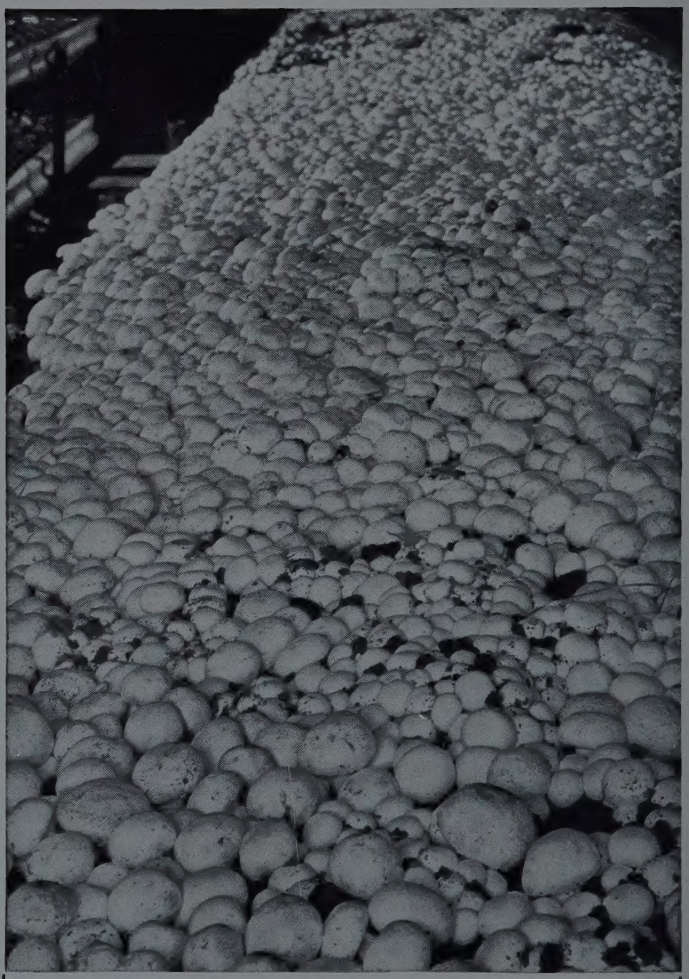

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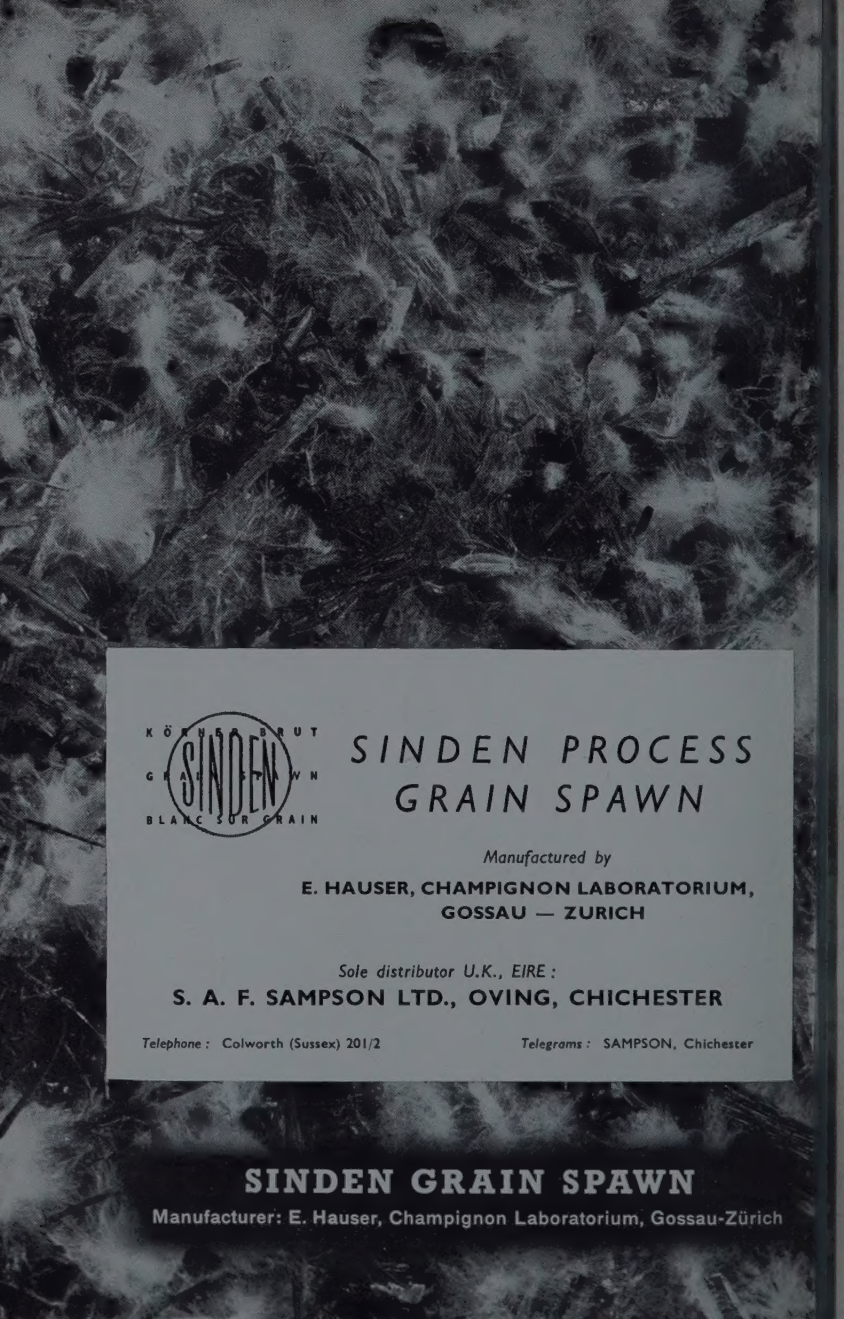


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AUG. - 1957
NUMBER 92

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*No responsibility can be accepted by the Editor, the Editorial Board, or the Mushroom Growers' Association for statements made or views expressed in this Bulletin, or for any advertisements included in this publication.*

## EDITORIAL

# CRITICAL

Mr. Ainslie Robertson told a lot of people at a recent Glasshouse Crops Research Institute " open day " at Littlehampton that many people, mushroom growers in particular, were somewhat critical of the lack of progress being made at the Institute, and added that he had made several journeys to Her Majesty's Treasury to try to wring the necessary funds out of those who hold the purse strings.

That there has been criticism there is not the slightest doubt, but the criticism has certainly not be levelled at individuals. Rather has it been aimed, and rightly so, at the system which, in spite of every effort, Mr. Ainslie Robertson's included, continually foils each and every move to get things really moving.

After all, it was at the end of September, 1954, that the Research Station at Yaxley was closed down, and this is August, 1957, and there has, then, been a lapse of nearly three years without any modern mushroom houses appearing over the sky line, however long they may have been in the blue print stage.

Those of us connected with the industry know full well the efforts made by Mr. Toovey, Director at the Institute, to get things on a working footing and of the excellent preliminary work already put in. All of us appreciate these things, just as we appreciate that three years is three years and that the closure of Yaxley was somewhat premature.

It is simply because we realise the many difficulties which have beset those who are anxious to push things along that we, in this publication, have studiously avoided any critical comment, being well satisfied that those of this Association who, in spite of the frustration continue to serve on the MGA Liaison Committee with the Research body, are well able to take care of our interests.

The time may come when criticism will be severe, but it has not yet arrived and Mr. Ainslie Robertson, far from singling us out for special mention in this field, should perhaps have given us a pat on the back for our restraint !

The fact that we were not officially invited to the "open day" may or may not be a cause for just criticism, but, as always, we are only too keenly aware of our own shortcomings and aware therefore, that slight errors such as this omission are likely to occur in the best regulated circles. WRA

## DO YOU USE FERTILISERS?

Many mushroom growers are now using fertilisers and, provided they are ordered in lots of not less than 4 cwt., the Government subsidy is payable. This, as the table below shows, represents a considerable saving to the purchaser.

It will be noted that the subsidy is not available on potash but on those containing nitrates and phosphates.

The table is taken from a July issue of *The Farmers' Weekly*.

### FERTILISERS ‡

(*Six-ton lots carriage paid to buyer's station*)

| | *Price (per ton)* | *Subsidy (per ton)* |
|---|---|---|
| | £ s. d. | £ s. d. |
| Sulphate of ammonia (20.8%N) | 20 2 0 | 8 18 6 |
| Nitro-Chalk (15.5%N) | 18 4 0 | 6 13 0 |
| Nitra-Shell (20.5%N) | 24 1 0 | 8 15 11 |
| Chilean nitrate of soda (16%N, 26%Sod.) | 28 0 0 | 6 17 4 |
| Chilean potash nitrate (15%N, 10%K, 20%Sod.) | 31 0 0 | 6 8 9 |
| *Muriate of potash, pink (60%) | 19 11 0 | — |
| *Sulphate of potash (48%) | 21 1 0 | — |
| *Sulphate of potash magnesium (26%) | 15 0 0 | — |
| Superphosphate | | |
| single, powder (18%) | 14 16 0 | 6 15 0 |
| single, granular (19%) | 16 10 6 | 7 2 6 |
| triple (47%) | 40 0 0 | 17 12 6 |
| Basic slag (15%) | 7 6 9 | 3 6 0 |
| (16%) | 7 15 9 | 3 9 0 |
| (17%) | 8 4 9 | 3 13 0 |
| Compounds | | |
| †(N9%, P9%, K15%) | 26 12 6 | 7 2 6 |
| †(N12%, P9%, K9%) | 27 10 0 | 8 8 3 |
| †(N9%, P18%) | 27 10 0 | 10 7 9 |
| †(N5%, P12¼%, K12¼%) | 24 4 0 | 6 13 8 |
| †(N8%, P12%, K8%) | 25 5 0 | 7 15 8 |
| †(P16%, K16%) | 22 6 6 | 5 15 6 |
| †(N9%, P6%, K18%) | 25 8 0 | 6 0 9 |
| (N12%, P12%, K18%) | 30 0 0 | 9 12 4 |
| †(N10%, P12%, K16%) | 29 6 6 | 8 14 4 |

*Prices ex-importer's store in 2 cwt. bags. ‡July prices.
Extra charges for small lots and for delivery to farms.
†Subject to early delivery rebate of 30s. a ton for July delivery.

## OBITUARY

Mr. Arthur Edwards, aged 75, of Speen Lodge Hotel, Newbury, Berks., passed away on Sunday, 16th June, and was buried at Inkpen, on Wednesday, 19th June. Mr. J. Stewart-Wood, member of the MGA Executive Committee, was at the funeral and represented the Association. The mushroom farm at Speen Lodge, consisting of 10,000 sq. ft. of tray beds will be carried on by the late Mr. Edwards' two daughters.

# MARKET RESEARCH . . .
# WHY AND WHEN THEY BUY*

In order to have some first-hand information from people who actually buy mushrooms, a pilot survey was carried out amongst women shoppers visiting High Street, Kensington, **London,** for the summer sales, on Tuesday, 25th June, and similarly amongst women in shopping areas in **Manchester** on 25th June and 26th June, 1957.

In all 199 women were interviewed. This total is small and the findings which result from it must be subject to confirmation by a larger sample. It must be recognised that the following statistics represent only the views of the women interviewed.

Yet, from the resulting data it is possible to obtain a mental picture of the age, and the social standing of some purchasers of mushrooms; of the regularity of their purchases; the reasons for their occasional purchases; the ways in which they serve mushrooms, and of their knowledge of the value of mushrooms in salads and slimming diets.

**TABLE 1**
**Popularity of Mushrooms**
**(Question: Do you like or dislike mushrooms?)**

| | London | Manchester |
|---|---|---|
| Women who like Mushrooms .. .. .. | 84% | 63% |
| Women who dislike Mushrooms .. .. .. | 16% | 37% |

*Mushrooms therefore have a greater popularity in the South than in the North. This survey did not attempt to answer the question which this situation poses, but it is a matter worthy of further investigation.*

**TABLE 2**
**(Question: Do you buy mushrooms Regularly or Occasionally?)**

| | London | Manchester |
|---|---|---|
| Buy Regularly.. .. .. .. .. .. | 24% | 34% |
| Buy Occasionally .. .. .. .. .. | 67% | 64% |
| Eat only field mushrooms .. .. .. | 5% | — |
| *Like mushrooms but do not buy .. .. .. | 4% | 2% |

*Reasons for not buying:
" Husband is an invalid and I have to buy to suit him."
" Eating them gives me nettle-rash."
" Afraid they are too fattening when fried."

*There is a higher percentage of regular customers in the North than in the South, although there is not a great deal of difference in the occasional purchasers. One interesting feature is the fact that the "'Field mushrooms only' Faddists" seem to congregate in the South.*

**TABLE 3**
**(Question: For what reason do you buy Occasionally?)**

| | London | Manchester |
|---|---|---|
| Think mushrooms are dear, and would buy more if they were cheaper .. .. .. .. | 40% | 33% |
| When I fancy them .. .. .. .. .. | 34% | 48% |
| When I want a treat.. .. .. .. .. | 7% | 2% |
| Depends on Menu .. .. .. .. .. | 9% | 2% |

| | | |
|---|---|---|
| For special events .. .. .. .. .. | 3% | — |
| When visitors are expected .. .. .. .. | 2% | 8% |
| When husband is away .. .. .. .. | 2% | — |
| When seen in shops .. .. .. .. .. | — | 2% |
| Would lose interest in them if ate them regularly | — | 5% |
| No reason given .. .. .. .. .. | 3% | — |

*The percentages given above refer only to those purchasers who buy mushrooms from time to time, i.e., a total of* 97 *out of* 143. *Of all purchasers of mushrooms,* 25% *think the price is too high and buy only when the price is low.*

## TABLE 4

### Effect of B.B.C. Talks and Magazine Recipes

**(Questions: " Do you buy Mushrooms because you heard them mentioned on the B.B.C.?" and " Do you buy because you read a recipe about them in a magazine?")**

| | London | Manchester |
|---|---|---|
| Purchased because of B.B.C. mention .. .. | — | — |
| Because of Magazine Recipe .. .. .. | 5% | 5% |
| For other reasons .. .. .. .. .. | 95% | 95% |

*One reason for the low mention of Magazine Recipes could be that since the appearance of editorial articles following the major public relations events of* 1956 (*the Women's Press Club Conference, and the Oxted Open Day to Women Journalists*), *no regular follow-up of editors has taken place. If regular press handouts are supplied, and if the greater number of editors of provincial newspapers and the like were included, there would no doubt be a greater prompting of readers to purchase by reason of editorial mention.*

*The position regarding the B.B.C. might well lie in the social grading of purchasers as indicated in Table* 13 *below. Those women who did buy because of magazine recipes belong to the higher income groups.*

## TABLE 5

### Buying Frequency of Regular Purchasers

**(Question: How often do you buy mushrooms?)**

| | London | Manchester |
|---|---|---|
| Twice a Week .. .. .. .. .. .. | 29% | 19% |
| Weekly .. .. .. .. .. .. .. | 52% | 81% |
| Fortnightly .. .. .. .. .. .. | 14% | — |
| Monthly .. .. .. .. .. .. | 5% | — |

*The buying position is clearly more satisfactory in the North than in the South where too many people buy at too great an interval.*

## TABLE 6

### Purchases in Winter

**(Question: Do you buy more Mushrooms in winter than in summer? If so, why?)**

| | London | Manchester |
|---|---|---|
| Buy more in winter .. .. .. .. .. | 38% | 25% |
| Buy same winter and summer .. .. .. | 62% | 75% |

The reasons given for buying more mushrooms in winter than in the summer are as follows:

**London:**

" Pick them in the fields in summer, so buy in winter."
" More sure they are fresh in winter—prefer the ' Partridge ' mushrooms."
" Eat more salads in summer."
" Use them in soups and stews."
" So nice in meat puddings."
" Have more hot snacks."
" Prefer salads in summer."
" Eat more fried food in winter."
" Nice in winter."
" Have more hot meals in winter."
" Make more hot snacks in winter."
" Do not have so many fried dishes in summer."
" Prefer mushrooms in winter."
" More cold meals in summer."

**Manchester:**

" Have more cooked meals in winter."
" Winter-time seems more appropriate."
" Like them fried and have more cooked meals in winter."
" Have more soups in winter."
" Buy them in winter, *when we can get them*!"
" Like them fried, but don't eat much fried food in summer."
" Like them hot."

## TABLE 7

### Salad Knowledge

**(Question: Do you know that raw Mushrooms make an excellent salad?)**

| | London | Manchester |
|---|---|---|
| Know .. .. .. .. .. .. .. | 14% | 31% |
| Don't know .. .. .. .. .. .. | 86% | 69% |

*Clearly customers in the North have a greater knowledge of the place of raw mushrooms in salads than similar people in the South.*

## TABLE 8

### Slimming Value of Mushrooms

**(Question: Do you know that Mushrooms are good for slimming diet? A quarter lb. of Mushrooms contains only 8 calories)**

| | London | Manchester |
|---|---|---|
| Know .. .. .. .. .. .. .. | 12% | 15% |
| Don't know .. .. .. .. .. .. | 88% | 85% |

*In both areas there is clearly much room for improvement. Women questioned were in some instances glad to know of the low calorific content of mushrooms as the following quotations indicates:* **London:**—" *Guessed they would not be fattening.*" " *Heard they were good for slimming.*" " *Agree with statement.*" " *Must remember this fact.*" " *Very interesting.*" " *Pleased to know about it.*" **Manchester:**—" *I'll eat more mushrooms now that I know.*" " *Glad to hear of it.*" *There was however one lady who declared that she was not interested!*

## TABLE 9

### Recipes

### (Question: Have you tried Mushrooms . . . ?)

| | London | Manchester |
|---|---|---|
| In Omelettes? | 30% | 20% |
| With Roes and Bacon on toast? | 13% | 5% |
| And Fish Pie? | 2% | 1% |
| And Spinach and Cheese Sauce | 4% | 4% |
| And Bacon Sandwich | 10% | 22% |
| With Poached Eggs? | 13% | 7% |
| In Salad? | 4% | 7% |
| Stuffed? | 1% | 3% |
| Flan? | 2% | 8% |
| Cheese Custard? | 1% | 2% |
| Fresh Mushroom Soup | 20% | 21% |

*There is considerable territorial variation in the extent to which the recipes have been tried, and also variation between knowledge and trial as indicated by salads, for instance. More people in* **Manchester** *know that mushrooms are good in salads than have actually tried them.*

## TABLE 10

### Favourite Ways of Serving Mushrooms

| | London | Manchester |
|---|---|---|
| With Bacon | 23% | 22% |
| With Mixed Grill or Steaks | 17% | 14% |
| Omelettes | 13% | 2% |
| Fried | 12% | 18% |
| On Toast | 8% | 8% |
| Sauce | 5% | 2% |
| Cooked in Milk | 4% | 11% |
| Meat Pies | 4% | 1% |
| Grilled | 3% | 13% |
| With Eggs | 3% | — |
| Soup | 3% | 4% |
| Stews and Casseroles | 2% | 3% |
| Flan/Vol au Vent | 1% | 1% |
| With Liver | 1% | — |
| With Cheese | — | 1% |
| Steamed with other vegetables | 1% | — |

## TABLE 11

### Meals

### (Question: Do you eat Mushrooms mostly at Breakfast, Midday or Evening meals?)

| | London | Manchester |
|---|---|---|
| Breakfast | 22% | 35% |
| Midday meal | 26% | 15% |
| Evening meal | 52% | 50% |

*Whilst both areas consume approximately the same amount of mushrooms for the evening meal, it is shown that* **Manchester** *people eat more mushrooms for breakfast than people in the South, whilst more Southerners eat greater quantities of mushrooms for the midday meal than do Northern people.*

## TABLE 12

### Age-Groups of Customers

| | London | Manchester |
|---|---|---|
| 21—30 .. .. .. .. .. .. .. | 10% | 25% |
| 31—40 .. .. .. .. .. .. .. | 28% | 38% |
| 41—50 .. .. .. .. .. .. .. | 37% | 25% |
| Over 50 .. .. .. .. .. .. .. | 25% | 12% |

*It appears that in the North the greater portion of the purchasers of mushrooms are younger than in the South: 63% of the purchasers being under the age of 40 as opposed to 38% in the South.*

## TABLE 13

### Social Groups

(The following is an approximate grouping of purchasers based on the social classifications issued by the Registrar General at the time of the 1951 census.)

| | London | Manchester |
|---|---|---|
| **ALL CONSUMERS** | | |
| Groups A.B. .. .. .. .. .. .. | 32% | 26% |
| Groups C.D.E. .. .. .. .. .. | 59% | 61% |
| Widows or Retired Persons.. .. .. .. .. | 9% | 13% |
| **REGULAR CONSUMERS** | | |
| Groups A.B. .. .. .. .. .. | 33% | 51% |
| Groups C.D.E. .. .. .. .. .. | 57% | 43% |
| Widows or Retired Persons.. .. .. .. .. | 10% | 6% |

*The interesting fact which emerges from this table is the high proportion of lower income groups who are both occasional and regular purchasers of mushrooms. In fact, as these lower income groups are in both areas greater in total than others, it is important to consider the type of appeal best suited to reach this majority purchasing class.*

## TABLE 14

### Reasons for NOT Purchasing Mushrooms

**London:**

" Don't like the look or smell of mushrooms."
" Don't like appearance."
" Don't like feel of them—so spongy. Ugh!"
" Don't fancy them. Have never tried them."
" Don't like the texture."
" Suspicious of them—might be poisonous."
" Can't stand the look of them. Look like mud on plate."
" Don't fancy them. Too expensive anyway."
" Don't like flavour."
" Mustn't have fat. So no fried food."
" Had them once (cultivated) but they were tasteless."
" Cannot stand smell when cooking."
" Never tasted them. Colour puts me off."

**Manchester:**

" Had them once in a café. Didn't like them at all."
" Haven't given them any thought."
" Don't find them particularly appetising."
" Have never tried them. Don't like the look of them."
" Consider them a luxury."
" Just never fancied them."
" Have never tried them. Wouldn't know what to do with them if I got some."

" None of the family seemed to like them."
" Don't like the flavour."
" Don't find much flavour in them."
" Got one mixed up with a toadstool when younger and that put me off them completely."

*The majority of the reasons are connected with smell, flavour and look. Perhaps for this reason the phrase " M-M-Mushrooms " is not likely to appeal to the majority of dissentients and is unnecessary in the case of those who already purchase mushrooms. Other appeals (such as slimming, or salads) might well find greater acceptance by this section of the public.*

**Conclusions:**

It is repeated that the above statistics derive from the opinions and statements of 199 women. These women were selected at random and in this respect the procedure followed is strictly in accordance with market research practice. It is never necessary to interview large samples of the population, provided that those interviewed represent a true cross section of the total population and are selected at random. In some respects the findings of this pilot survey need adjustment: for instance not enough young housewives (in the 21-30 age group) were interviewed. Similarly far more people in the lower income groups need to be interviewed. At present the higher income groups predominate and the findings are therefore biased towards the rich and need to be adjusted towards the poor. The true relationship between the social groups AB against CDE should be in the ratio of 6% to 94%. As will be seen, the proportion is 32% to 59% in London and 26% to 61% in Manchester.

Nevertheless, were the above adjustments achieved by reason of a much larger survey, it would most probably be found that the main findings of this pilot survey were confirmed.

Thus it is safe to assume that the following problems are those which must be solved:—

(1) **How can the occasional purchasers of mushrooms be converted into regular purchasers?**
(2) **How can more greengrocers in the North be induced to offer mushrooms to their customers?**
(3) **How can those Southern customers who buy fortnightly and monthly (23% of all regular purchasers in London) be induced to buy at more frequent intervals, say weekly?**
(4) **How can the summer sales slump (and price fall) be levelled?**
(5) **How can still more people in the North be induced to become regular mushroom purchasers?**

The only answer which meets the situation is that of effective publicity. To be effective, publicity must be flexible, and allow of its appeal to be varied to meet changing situations. The one proved way of so doing is by the use of paid-for publicity. Editorial mention remains at the mercy of the editor and follows his editorial policy. Such editorial mention is desirable and useful.

Coupled with paid-for publicity is the need for point-of-sale material (the last-minute reminder to the shopper to buy mushrooms), achieved by the use of crowners and posters, and of course supplemented by the use of bags.

Within the limits imposed by the total of the spawn levy and of the contributions of wholesalers and merchants, so the maximum amount should be devoted to paid-for publicity and point-of-sale material. In this manner a strong impact can be made on the public—to the profit of all mushroom growers and to those merchants who so generously contribute substantial sums of money.

**The foregoing survey was conducted by T. J. Rudkin and presented to the Association by G. Street & Co. Ltd., Advertising Agents, 11 Berkeley Street, London, W. 1.*

# COPPER SULPHATE INEFFECTIVE AS A CONTROL FOR YELLOW MOULDS IN MUSHROOM BEDS

**Dr. E. B. Lambert and Dr. T. T. Ayers**[1]

It is well-known that " yellow moulds " frequently invade mushroom beds in sufficient amounts to cause severe reduction in yield. In the United States steam and formaldehyde are used to eradicate these moulds from the casing soil and inside the houses and sanitary measures are followed to prevent the houses from becoming contaminated again from outside sources. Obviously a control programme based on adding a selective fungistat to the compost would be more satisfactory. A promising lead in this direction seemed to be offered by the view, repeatedly expressed in England, that adding between $\frac{1}{2}$ pound and $1\frac{1}{2}$ pounds of copper sulphate to 1 ton of compost retards the growth of yellow moulds.[2]

During the past year we employed 120 trays in two separate experiments to obtain additional information on the effectiveness of this practice. In one series of experiments we added copper sulphate to the compost in trays comparatively free of pests. It was applied in water solutions containing 0·2, 0·5 and 1·0 per cent. of copper sulphate to the surface of the compost after spawning ; in the soil before casing ; and to the trays after the first " flush." The experimental trays, each with $3\frac{1}{2}$ square feet of growing space, were arranged in randomized blocks replicated six times. The average yields of the sets of six trays treated alike ranged from 2·1 to 2·4 lb. per square foot, but there was no indication that the copper sulphate treatments increased or retarded mushroom yields.

To test the effect of copper on the invasion of the compost with yellow moulds, we added copper sulphate, again in water solution, to the finished compost before filling the trays at the rate of 0, 0·5, 1, 2 and 4 lb. of copper sulphate per ton of compost and to the soil before casing at the rate of 0, 1, 2 and 4 lb. per ton. Trays with all combinations of these treatments were arranged in four randomized blocks of 20 trays each. All of the trays were dusted with yellow mould spores soon after spawning and again after casing. These moulds were similar to Gandy's YM1 and YM2.[3] One of them caused typical " mat disease " symptoms in the compost. Following this treatment the crop was cared for in the usual manner.

By the end of the second break, the yellow moulds had formed a continuous layer just beneath the casing soil in all 80 trays. This drastically reduced further mushroom production. The amount of mould varied slightly from one tray to another, but there was no correlation between the treatment with copper sulphate and the prevalence of the yellow moulds. For example, the yellow moulds were as prevalent in trays containing compost and soil treated separately with 4 lb. of copper sulphate per ton as in those filled and cased with non-treated materials.

Apparently copper sulphate in the amounts added to the compost and casing soil has no appreciable affect on either the yield of mushrooms or the development of yellow moulds under our conditions.

1. Pathologists, Crops Research Division, Agricultural Research Service. United States Department of Agriculture.

2. See the following journal articles: MGA Bull. No. 43, page 226, 1953: MGA Bull. No. 53, page 152, 1954: MGA Bull. No. 77, page 147, 1956: Mushroom News Vol. V. No. 7, page 139, 1956.

3. Described by D. G. Gandy in Mushroom Research Station Final Report 1954: 28-32 (published in 1955).

## *IS IT ?*

**Mr. T. G. Figgis** of West Byfleet, Surrey, a short time ago completed a new experimental shelf house. He writes to *The Editor:*—" You may be interested to know that the maiden crop has started well with the best* bed (there are ten beds separately recorded—with three different composts) cropping 36 days after spawning and producing 1·56 lb. per sq. ft. and 0·89 lb. per sq. ft. on the 1st and 2nd flushes. These weights are without stalks. As we pick " all flats " I think I can claim 3 lb. *gross* from two flushes in 13 days—is this a record?

*Chicken manure boosted compost, filled 10-11 inches.

## *MORE PUBLICITY CONTRIBUTIONS*

Latest contributors to the MGA Publicity Fund are **Messrs. A. Williamson & Co. (19) Ltd., Salesmen, Smithfield Market, Birmingham 5,** with a welcome donation of £6 6s. 0d.

Recent contributions (to 18th July) are listed herewith:—

| | £ | s. | d. |
|---|---|---|---|
| †C. Snowdon & Co. Ltd., Salesmen, Castlefolds Market, Sheffield .. | 3 | 12 | 0 |
| A. Williamson & Co. (19) Ltd., Salesmen, Smithfield Market, Birmingham | 6 | 6 | 0 |

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†Previous contributions already acknowledged

*†Amounts collected by Spawn Merchants are not for publication

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# MUSHROOMS AT THE "ROYAL"

## H.M. THE QUEEN AND PRINCE PHILIP VISIT MGA STAND

My wife and I set off for the Norwich Show, on 1st July, after a week's preparation. The original stand design was thought out by my wife and was seen by Mr. G. W. Baker, Chairman of the Publicity Committee, and Mr. Winston Alderton on the preceding Friday. The final design, which was " MGA " in blue half-pound Bowater-Eburite cartons on a background of $\frac{1}{4}$ lb. white Hartmann Trays, included a " picture frame " of the blue half-pound cartons, chosen by Mr. W. J. Hardman, (who is an interior decorator specializing in stained glass), and my wife. We reached Norwich by 4 p.m. and had completed the exhibit at about 9.20 p.m.

Judging took place the next day (Tuesday) and the public were not allowed into the tent until 12 noon. Unfortunately, one of the four judges was called away for another competition and consequently, although the flower section had been judged, the prepack exhibits were not judged until 12.30 p.m. The photo shows the exhibit with a few sample American prepacks on the left hand side with new British prepacks on the right. In the centre can be seen the P.P.D.A. Award of Merit.

As soon as the public entered the tent there was a buzz of interest in mushrooms and we could hear " m-m-m-mushrooms " from then on until the show closed.

Competition was very close and the judges returned to the exhibit at about 1.45 p.m., while we were surrounded with people. The first prize was won by Suntipt Fruit Grading Services, a subsidiary of Broome & Green, who put up a splendid exhibit of almost all types of prepacked fruit and vegetables. The Mushroom Growers' Association won the twenty-five guinea Award of Merit, which was presented by Produce Prepackaging Development Association.

We were up at 6.30 a.m. on Wednesday in order to deal with the replacements, which were provided by Mr. M. C. Luxmoore, Snowcap Mushrooms Ltd., Yaxley, D. J. and C. J. Bradfield of Broadlands Mushroom Farm, Great Yarmouth, and Major B. G. Britton, The Rookery House, Mundesley, Norfolk. We did not have time to finish all the replacements before the public came in at 9 a.m., so, with the aid of some of the staff of Messrs. Hartmann Fibre Co., we arranged an informal packing demonstration quietly replacing the necessary packs.

The visit of Her Majesty The Queen on Wednesday afternoon was, of course, the highlight. Mr. Eric Gardener, President of the NFU Market Produce Show Society, introduced me to Her Majesty who was very interested in the display and asked a few questions regarding the prices of prepacked mushrooms compared to the normal packs. His Royal Highness Prince Philip asked what the lettering " MGA " stood for and was particularly interested to learn that the Association consisted

*Her Majesty The Queen talking to Major A. L. A. Dredge at the MGA exhibit.*

of some 400–500 growers including many from the Commonwealth and foreign countries: he also inspected one of the small trays, which was handed to him by Mr. Gardener, and was much amused to hear that it was named " Bachelor's Breakfast."

On Thursday, the Bradfield Brothers of Broadlands Mushroom Farm, Yarmouth, took over the exhibit and once again a large crowd of people gathered round the mushrooms all day. The BBC Television representative visited the exhibit and took away two of the packs which were shown on the BBC Television the same evening when the reporter mentioned that " The mushrooms had been packed on the preceding Monday, but were still in perfect condition."

My wife and I returned to the Show at about 2.45 p.m. and spent about an hour talking to various people, including growers and members of the trade and public. We set off for home at about 4.15 p.m., leaving the exhibit in the capable hands of the Bradfield Brothers. The next morning, Winston Alderton, Secretary of the MGA, took over and sold most of the produce to the public in the afternoon.

During the four days of the show, approximately 136,000 people paid at the entrance gates. We estimate that, including other exhibitors and their staff, no less than 100,000 saw the MGA exhibit. Two thousand " Winning Ways," by Frances Perry and two thousand " Month by Month " recipes were distributed and people were really interested in finding new ways of cooking mushrooms. A question regularly asked during the time was, " Where and when can we buy these lovely mushrooms?" We were very surprised at the large percentage of people in

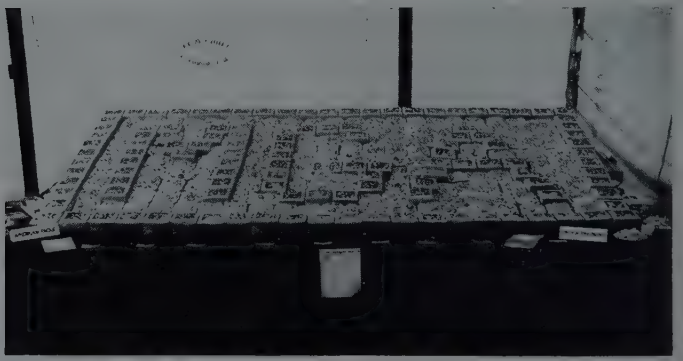
this part of the world who did not realise that cultivated mushrooms should not be peeled and considerable interest was shown in the " Don't Peel " notices pinned at the front of the exhibit. Visitors included people from the Commonwealth and almost every part of the world.

There is not space to quote all the various press notices about the Show, but general impressions were very favourable in the horticultural, daily and local press. No less than three BBC Broadcasts were made during and after the Show. There is not the slightest doubt that mushrooms were well in the limelight in the NFU Market Produce tent and thousands of questions were asked throughout the four days. The public, of course, wanted to buy mushrooms all the time, but the Committee, quite rightly, ruled that no produce could be sold until the last day.

One grower who came to the show fully prepared to criticize prepacked mushrooms was amazed at their fresh condition. He spent several minutes talking to us, asking details of cartons, " celawrap," heat sealers and various containers: we hope he will join the happy band of prepackers in due course.

Of all the remarks made during the show, the one that impressed us most was that of a retired Naval officer who said that, " Every single member of the public present at the show should be brought in to the Market Produce tent and shown what Britain can produce, so that they would stop buying foreign produce when they had fruit, flowers and vegetables of such excellent quality available in Great Britain."

A. L. A. Dredge.



*The MGA Stand at The Royal Agricultural Show.*

## RESIGNATION—APPOINTMENT

Owing to pressure of work, Mr. Stanley Middlebrook has resigned from the Executive Committee, and Mr. A. A. Spencer, of Greenhill Nurseries Ltd., Leeds, has agreed to fill the vacancy. Representation on the Committee from Yorkshire is thus maintained.

# WORLD'S PRESS DIGEST

New finishes which enable a floor to be produced in one operation during placing of site concrete have been developed by J. H. Sankey and Son Ltd., of Essex Works, Ripple Road, Barking, Essex. Supplied as dry powder, they are sprinkled on to the face of the wet concrete slab and then trowelled in. The resulting floor resists abrasion. "Metal top" incorporates metal aggregate for heaviest factory wear by steel-wheeled industrial trucks. This product can also be applied to existing floors to make old worn concrete hard and non-dusting. *Scope*, June/57.

It may ultimately be cheaper to make crops resistant to pests and disease by nuclear radiation rather than to use insecticides, Dr. T. E. Allibone, Director of the research laboratory at Associated Electrical Industries, suggested at a recent convention. *Grower*, June 29/57.

Voluntary precautions for the handling of diazinon have been outlined by the Ministry of Agriculture; they include the wearing of rubber gloves and face shield when handling the concentrates. A minimum interval of 14 days between last application and harvesting is advised. This compound is not included in the poisonous substance regulations. *Grower*, June 29/57.

Trials are being made by the Ministry of Works of arresting decay in buildings by using silicones. Silicones are complex compounds derived from the metal silicon, which is produced by subjecting quartz and sand to high temperatures. The results of the treatment are invisible, since the solution does not form a surface film. By chemical means it makes porous materials (such as stone and wood) impervious to rain water and to the corrosive acids in the atmosphere . . . . . In America silicones have been used extensively for the protection of concrete road works from frost damage. *Daily Telegraph*, June 10/57.

In the field of preservation it is not improbable that particular attention will be given to the penetration of preservatives into wood and that it may become possible to preserve wood adequately and economically without the use of costly and bulky pressure plant. Means of reducing the hygroscopicity of wood and consequently its swelling and shrinking may also be expected.
Prof. F. W. Jane, of Royal Holloway College, to Institute of Wood Science, reported in *Nature*, June 8/57.

Another interaction of the fields of pure and applied research has been the recent proposals on the use of insect growth hormones as insecticides, and a paper on insect hormones would have the interest of both sides and could contribute something to that integration which is so much to be desired. One paper which illustrates very well the possibilities of such integration is that by V. G. Detheir on "Repellants." P. T. Haskell in a review in *Nature*, June 6/57.

Mr. C. C. Doncaster at Rothamsted has found a springtail which attacks the potato eelworm . . . . . (But) it is not only necessary to find predators capable of feeding on the eelworm; they must be natural predators which attack the eelworm and nothing else. *Grower*, June 22/57.

The peoples of Europe and Asia are divided into two ethnomycological groups, mycophobe and mycophile. The Russians, for example, love mushrooms, and their literature is full of kindly references to them. The Anglo-Saxons are unsympathetic, and Mr. Wasson says he has searched English literature in vain for a single appetising word about mushrooms. (From a review of R. G. & V. P. Wasson's limited two-volume 125-dollar opus, "Mushrooms, Russia & History").
*Daily Telegraph*, June 19/57.

"Red Geotrichum" or "lipstick mould," which is a competitor in the compost with mushroom spawn, is invariably referred to as a *Geotrichum* sp. . . . . The fungus has been identified (at the Commonwealth Mycological Institute) as *Sporendonema purpurascens* (Bonorden) Mason & Hughes comb. nov.
F. C. Wood, in *Nature*, Feb. 9/57.

"At present it would be difficult to give a subsidy on potash when we have little assurance that the effect would not be an increase in price," said the Minister of Agriculture, Mr. Heathcoat Amory. *Commercial Grower*, June 14/57.

The " Harris " oil-fired air-heaters (Harris Engineering Co. Ltd.) not only provide winter heating but may be used to provide positive air circulation to assist in summer cooling, or to introduce fresh air for ventilation.

*Digest of Equipment*, May-June/57.

The Suxé Air Heater can save a tremendous amount of outlay by eliminating costly boilers, pipework, etc. Hot air is introduced into the building through suitably disposed ducting. (The Hemel Hempstead Engineering Co. Ltd.)

*Digest of Equipment*, May-June/57.

Mr. P. B. Flegg had had some interesting preliminary results at the Glasshouse Crops Research Institute from the addition of ground-up dried compost to the casing. The compost was taken from the stack when it was ready to be put into the house. It was dried and put through a mill. The powder was then added to the casing soil at the rate of 2 or 4 ounces to the square foot. In a test with pots, yield was increased by nearly 50 per cent. In the beds the increase was 25 per cent. at both the two-ounce and the four-ounce levels. The mushrooms were also bigger.

H. G. Schaffer in a full report in *Grower*, June 1/57.

The new mushroom sheds at Fairfield Experimental Horticulture Station are almost completed and should be ready for experimental work during the summer. The unit is of interesting construction, comprising two cropping sheds and a composting shed, each measuring 40 ft. × 18 ft., of relatively low cost, yet of very good insulating properties. Architect-designed, the sheds are in fact similar to the rhubarb-forcing sheds at Stockbridge House, Selby. *Preston Guardian*, June 15/57.

The occurrence of estrogens in plant substances and in peats is discussed in " Hormones in Peat," a paper by Herbert Carls in *Pharmazie* 8 (3), 1953. More than 15 years ago substances with follicular hormone action were detected in peats used for baths, but until recently it had not been possible to attribute the medicinal value of such baths to these estrogens. *Biological Abstracts*, June/57.

Pyrethrum and allethrin, in the absence of synergists, showed highly significant losses in toxicity after being put through a thermal fog machine.

W. E. Collins in *Journal of Economic Entomology*, 49, 1956.

As soon as the mushrooms are cut by McIntyre Brothers, of Kansas City, they are taken to the packing plant where they are washed and specially treated with a preservative. They are packed in paraffin-lined boxes, so that the box won't absorb the moisture, and moved to a refrigerated cooler. Shipments are usually made at night so that they arrive at the market early in the morning.

*The Packer*, March 30/57.

A new method has been developed in which fresh seaweed is milled and the resultant pulp sun-dried.

E. Booth in *Journal of Science in Food and Agriculture*, 7, 1956.

The American Mushroom Institute is to finance a new analysis—which may uncover a high level of B12—of the vitamin content of mushrooms. The only complete vitamin analysis to date was done at the Univeristy of Massachusetts a number of years ago, before the existence of vitamin B12 was even known.

*AMI News*, May/57.

During World War II, mushrooms in the United States were considered one of the seven basic food commodities and held a priority for packaging containers.

*The Packer*, March 30/57.

Officials of the American Mushroom Institute will urge the passage of a 100,000 dollar research bill. The bill, to provide funds for the construction of a research mushroom house at the Pennsylvania State University, is being considered by the Senate Appropriations Committee. *AMI News*, May/57.

We plan to continue marketing research and extension on mushroom problems at the University of Delaware because the mushroom industry is important in Delaware, said Dr. G. Fred Somers, associate dean and director of the University.

*AMI News*, May/57.

Concrete is an economic necessity as a base to areas where solid fuel and such loose and bulky commodities as horse-manure, peat, soil, sand and composts are handled. Concrete paths will allow easier movement of wheeled transport which in turn saves time and leaves the worker less tired and better able to tackle the next task.

W. R. Chapple in *Nurseryman & Seedsman*, June 6/57.

# *British —by Gad, Sir!*

If we wished to be fashionable, we would claim that our mushroom spawn was produced from Patagonian strains, that our Spawn Research Laboratories were staffed by Tibetans, and that the scientific equipment we use was imported (at enormous cost!) from Ruritania!

We are not ashamed to say, however, that, like the Rolls Royce and the Vickers Viscount, 100% Spawn is also 100% British. Our Spawn Research and Development Laboratories are probably the most advanced in the world, and the spawn they produce is equal, if not superior, to any spawn.

A bold statement? You can put it to the test! Next time you are spawning, run 100% Spawn against *any* other brand. You will find this all-British product outstanding for yield, quality *and* reliability.

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A paint incorporating dieldrin, BHC and captan is being marketed under the name of Lakil by Brandam Bros., of Rotherhithe. It is claimed that in glasshouses it will keep down both pests and fungus diseases for up to two years.

*Grower*, June 1/57.

Once the weather turns really hot the trade falls right away (*Grower*, June 1/57). Mushroom inquiry is slow with obviously the Holiday flush tending to push down the market (*Fruit Trades' Journal*, June 15/57). Arrivals were plenty to meet the demand, which seems to fall off as the call for salads rises (*Grower*, June, 15/57). Mushroom supplies seemed lighter, but there were more than enough for the demand (*Nurseryman & Seedsman*, June, 27/57).

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**If the journals referred to are generally available, they are most easily obtained by placing an order with your bookseller or stationer.**

# KENT FARM WALK

## Increased Publicity Contributions Recommended

A company of nearly 100 people took part in a farm walk held, by kind invitation of Major A. L. A. Dredge, at Combe Bank Market Gardens, Sundridge, on Saturday, 20th July.

In an after-tea discussion publicity came in for particular attention. Major Dredge presided, supported by Mr. G. V. Allen MGA (Chairman), Mr. G. W. Baker (Chairman, Publicity Committee), Mr. Pearson (foreman at Combe Bank) and the MGA Secretary.

The Secretary referred to the Runciman Report which set the annual production of mushrooms at 10,000 tons. He said a figure of 20,000 tons had been given by Mr. Baker and himself in evidence before that Committee. Estimating a production of 50 lb. for each carton of spawn, the members contributing 2d. per carton to the Publicity Fund would be producing considerably in excess of this figure. In addition there were those who did not support the fund plus those who remained outside the organisation. A considerable amount of mushrooms were probably produced under a scheme sponsored by a commercial company. Mr. G. V. Allen said there was little doubt that the Runciman Committee figure was far from accurate.

Grower Members present unanimously decided to recommend to the Executive Committee that the rate of publicity contributions should

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*Seeing the reports of various Mount users in your adverts in the Bulletin from time to time, I thought you would be interested to know of my own results.*

*You will be aware that I have now spawned regularly with your Mount White, both Moist and Granular, for close on two years and during this time have used many hundreds of cartons. We grow in the standard Danish fish box (composted stable manure) and crop for six weeks. Over a period of twelve months we have averaged 1·9 lb. per sq. ft., several crops exceeding 2 lb., and latterly it has been the exception rather than the rule to crop less than 2 lb. In fact our best crop recently has done 2¾ lb. As a point of interest, this has occurred since we adopted your suggestion of spawning with 25% of your White Grain, in addition to the Moist White manure spawn.*

*An outstanding feature of our cropping has been the really excellent quality of mushroom produced. We are delighted with the results and you may use this tribute as you wish.*

Yours faithfully,
(signed) A. Sanford.

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be increased forthwith. **The existing scale works out at 2d. on each £7 10s. received by the grower from sales.**

*Major A. L. A. Dredge and Mrs. Dredge. Major Dredge is making novel use of a mushroom as a buttonhole.*

In all there is 17,000 sq. ft. of bed space at Combe Bank in four houses, each containing 2,400 sq. ft., and two houses of 3,600 sq. ft. each. The houses are all two-storeyed, but the farm was not purpose built for mushrooms. In fact part of the buildings now in use were originally stables, housing the well-known Suffolk Punches of the late Sir Robert Mond, founder of I.C.I.

Major Dredge has been at Combe Bank about four years and the conversion of the stables to mushroom growing houses had been done some years before he took over. The conversion of existing buildings to mushroom houses is usually a somewhat difficult business, but at Combe Bank the change was effectively carried out.

Two storeyed houses such as those in use on this farm always present their own peculiar problems and generally yields from such houses suffer by comparison with the purpose built single storeyed structure.

Growing is all on the shelf system with the beds about 8 inches deep. Picking period is one of 10½ weeks in all and the average yield per sq. ft. works out at just over 1½ lb. including stalks. Three crops are taken each year.

Local subsoil is used for casing and, said Major Dredge, " it works out reasonably cheap and we do not find any difficulty in handling it."

Horse manure forms the basis of the compost with racing stable and medium manure mixed at the rate of two of light to one of medium. Composting takes a month in all with four turns at intervals of one week. Water is added at stacking and a year's experiment is now going on with the use of Shirley Activator with control.

Of particular interest to visitors was half of a house in which the " Rasmussen " type compost was in use. Commenting on the Rasmussen method and the results so far obtained, Major Dredge said, " We are very pleased with it so far and, at the moment, the Rasmussen is slightly ahead after eight weeks' cropping." He added, "The real interesting part has yet to come as Rasmussen claims that, using his methods, cropping continues steady till the last flush."

Normal composting procedure at Combe Bank includes the addition also of gypsum at the rate of 1 cwt. to 2½ tons of manure at stacking. Shirley Activator is added at the first turn. Major Dredge reckons to provide 120 sq. ft. of beds for each ton of manure delivered. He estimates that composting reduces the delivered product to about a half of its original volume.

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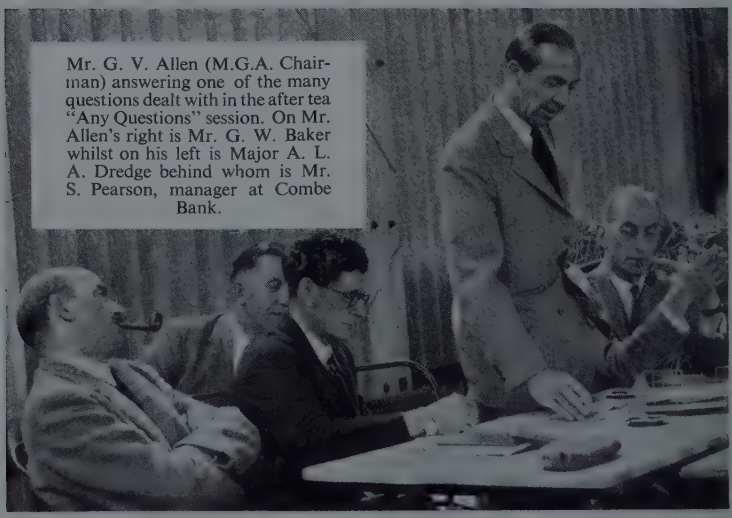
Visitors found the soil sterilizing plant, on the John Innes system with Barford boiler, of special interest and the method of handling simplicity itself. The uses of an ordinary builders' power hoist were demonstrated apart from the fact that some visitors went "aloft" for a view of the nearby Convent garden.

The spacious and well-built composting shed was admired, and plans for enlarging this and for building a completely new packing house and four new houses, each of 1,800 sq. ft. were listened to with interest.

A new packing shed is a "must" at Combe Bank, for Major Dredge, with his great enthusiasm for prepacking, finds the existing building, apart from its age, far too small. About 40% of the mushrooms from Combe Bank are sold locally and 10% are prepacked. "I reckon to make about 1/- gross or 6d. net additional profit out of prepacks," said Major Dredge, adding, "The margin between the return for prepacks and for chips in a time of low prices is even more marked." Soon he hopes to include $\frac{1}{4}$ lb. packs as against the $\frac{1}{2}$ lb. now in use.

The Barford boiler, to which reference has already been made, is now oil fired, and particular attention was paid to the mounting of the oil injector unit—on the tilt to avoid the oil drip back. Comparing this with the other heating units, the saving in general cleanliness was quite apparent.

Major Dredge has no difficulty at all in disposing of the mushroom compost. "I advertise it in a local paper and it is readily sold," he said. He sells at 5/- a sack or five sacks for £1. Sales are steadily improving and now amount to 80 sacks per month.



Mr. G. V. Allen (M.G.A. Chairman) answering one of the many questions dealt with in the after tea "Any Questions" session. On Mr. Allen's right is Mr. G. W. Baker whilst on his left is Major A. L. A. Dredge behind whom is Mr. S. Pearson, manager at Combe Bank.



*Picture by courtesy of "The Grower"*

# SHIRLEY ACTIVATOR - M

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# PUBLICITY TO BE STEPPED UP

**Between £4,000 and £5,000 to be spent in a year**

The MGA Executive Committee has agreed to the spending of between £4,000 and £5,000 on publicity in the coming year and expenditure on this scale is to commence immediately.

Members are well aware that, to date, the MGA Publicity Committee has organised various events designed to attract publicity for the cultivated mushroom. Now that the Publicity Fund has built itself up it has been decided to engage a firm of Public Relations experts to deal with some of the major publicity work. The Publicity Committee will, however, continue to handle and directly organise such activities as it thinks fit.

The engagement of a Public Relations Organisation will cost £1,500 per year plus some additional costs for any activity organised by the firm at the express direction of the Publicity Committee. The Publicity Committee itself will arrange for newspaper advertising, the paper bag scheme, recipe leaflets, exhibitions, etc. For this purpose £1,000 has been allocated for national newspaper advertising, £1,100 to subsidise the publicity paper bag scheme, with £300 for Press hand-outs, £320 for administration, new recipe leaflets, etc., and £700 for other activities, bringing the total estimated expenditure in a full year to around £5,000.

Messrs. G. Street & Co. Ltd., of Berkeley Street, London, W.1, have been appointed advertising agents to the Association.

The sale of publicity paper bags has exceeded the 2½ million mark and it is confidently expected that sales, in a full year, will not only reach but may well exceed the target set of 20 million.

In order to further assist sales two new bag designs have been approved by the Publicity Committee and these bags should be on sale within about a month.

At the moment the bags are all being distributed by Messrs. Hobbs of Maidstone, Kent, but negotiations have now been completed to enable sales from other points in the British Isles, including Yorkshire and Lancashire.

Another important decision by the Publicity Committee concerns recipes. Hitherto reliance has had to be placed on recipes obtained from a number of sources. The weakness has been that, in many cases, the resultant dishes have remained untried by anyone closely connected with the Association. To put this matter of recommended recipes on a firm foundation the Publicity Committee propose appointing a committee of ladies—wives of members of the Executive Committee included—to advise the Publicity Committee on recipes which should be used. This committee of ladies will be asked to try out sample recipes.

Arrangements are going forward for the " Mushroom Week " at the Tea Centre in Lower Regent Street where, in conjunction with the Gas Council, the MGA is holding a full week of mushroom publicity. To attract the attention of the public, a full window display of mushrooms actually growing, is to be staged. Inside the Tea Centre cooking

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| **Salesmen:—** | £ | s. | d. |
|---|---|---|---|
| Francis Nicholls Ltd., Smithfield Market, Birmingham | 157 | 10 | 0 |
| R. E. Jenkinson Ltd., Covent Garden Market, W.C.2 | 105 | 0 | 0 |
| T. J. Poupart Ltd., Covent Garden, London, W.C. | 100 | 0 | 0 |
| Dan Wuille & Co. Ltd., Covent Garden Market, W.C.2 | 50 | 0 | 0 |
| Wm. Artindale & Son Ltd., Castlefolds Market, Sheffield | 21 | 0 | 9 |
| J. Collingridge Ltd., Covent Garden Market, W.C.2 | 25 | 0 | 0 |
| Geo. Jackson & Co. Ltd., Smithfield Market, Birmingham | 5 | 5 | 0 |
| Ed. H. Lewis & Sons Ltd., Covent Garden Market, W.C.2 | 5 | 5 | 0 |
| A. E. Phippen (Brentford) Ltd., Brentford | 5 | 5 | 0 |
| C. Snowdon & Co. Ltd., Castlefolds Market, Sheffield | 21 | 6 | 0 |
| Marks & Co. Ltd., Covent Garden, London, W.C. | 1 | 1 | 0 |
| J. Stratton Ltd., Salesmen, Spitalfields Market, London, S.E.1 | 5 | 5 | 0 |
| Mitchell Bros. (Andover) Ltd., Salesmen, Vigo Road, Andover | 2 | 2 | 0 |
| Sir Ernest Shentall Ltd., Salesmen, Chesterfield, Derby. | 2 | 2 | 0 |
| Herbert Hitchcock & Son Ltd., Salesmen, Boro' Market, S.E.1 | 5 | 5 | 0 |
| Wm. Morgan & Co. Ltd., Salesmen, Custom House Street, Cardiff | 10 | 10 | 0 |
| Ernest White Ltd., Salesmen, Kirkgate Market, Leeds | 5 | 0 | 0 |
| Jas. Blackburn (Manchester) Ltd., Salesmen, Smithfield Market, Man. | 10 | 10 | 0 |
| C. W. Tooley & Son Ltd., Salesmen, Nottingham | 2 | 2 | 0 |
| Wm. Tolley & Son Ltd., Wholesale Market, Nottingham | 2 | 2 | 0 |
| G. E. Leatherland Ltd., St. Andrew's Street, Newcastle-on-Tyne | 66 | 16 | 6 |
| Geo. Stansell Ltd., Spitalfields Market, E.1 | 10 | 10 | 0 |
| Barnes Bros. (Brentford) Ltd., Brentford | 5 | 5 | 0 |
| P. & T. Fitzpatrick Ltd., 22 Queen Square, Liverpool 1 | 5 | 5 | 0 |
| Wm. Bulman & Leatherland Ltd., 30 St. Andrew's St., Newcastle-on-Tyne | 5 | 0 | 0 |
| Jackson & Lakin Ltd., Nottingham | 3 | 5 | 6 |
| Reuben Levy Ltd., 88 Spitalfields Market E.1 | 8 | 9 | 2 |
| **Sundriesmen, etc.:—** | | | |
| Thomas Elliott Ltd., Eagle Mills, New Church Road, S.E.5 | 10 | 10 | 0 |
| Shirley Organics Ltd., Vicarage Wharf, Battersea, S.W.11 | 25 | 0 | 0 |
| Stable Manures Ltd., Manure Dealers, Worthing and Newmarket | 60 | 0 | 0 |

***Spawn Makers/Merchants:—**

H. Mount & Sons Ltd., Littlebourne, Canterbury.
W. Darlington & Sons Ltd., Southcourt Road, Worthing.
Monlough Food Production Co. Ltd., Ballygowan, Belfast.
S. A. F. Sampson Ltd., Oving, Chichester.
Geo. Monro Ltd., Hertford Road, Waltham Cross.
Pinkerton's Scottish Mushroom Laboratories, Millerston, Glasgow.
Agricultural & Chemical Co. Ltd., 51 Barbican, London, E.C.1.

*Amounts collected by Spawn Merchants are not for publication.

demonstrations will be going on all day from a number of demonstrators. To give the week a good send-off, invitations are being sent to members of the Press to attend a reception on Monday, 9th September.

## MUSHROOM COMPETITIONS AT SOUTHPORT

The mushroom competitions which have for so long been a feature of the annual Mushroom Industry Exhibition, are to be held in connection with the two-day Refresher Course at Southport, Lancs., on 2nd and 3rd October.

The competition schedule, together with a form of entry, will be sent to all members in due course.

It is hoped by those connected with the industry that these competitions will be well supported, especially by growers in the North.

## MUSHROOM SCIENCE 3

*Mushroom Science* 3, the proceedings of the 3rd International Conference on the Scientific Aspects of mushroom growing, is due out this month.

This publication deals with the conference which took place in Paris in June, 1956. It follows *Mushroom Science* 1 (Peterborough, 1950) and *Mushroom Science* 2 (Gembloux, Belgium, 1953).

*Mushroom Science* 3 is larger that the previous publications and promises to be full of interest to mushroom growers.

You should place your orders, without delay, to the MGA Secretary. Cost of *Mushroom Science* 3 is 30/-, post free.

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*is as great as ever*

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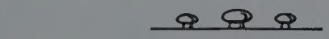

*We have been established for over 70 years in Smithfield Market, Birmingham, and having recently obtained more selling space in the market itself, we are now in a position to offer you excellent facilities for the sale of MUSHROOMS.*

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We advise on Culture, Packaging and Marketing. J. E. R. SIMONS LTD., HARLOW, ESSEX. Tel. POTTER STREET 65 & 222. Sole Distributors for MOUNT SPAWN—Moist, Dry, Granular and Grain.

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## MURPHANE DUST

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For dusting use 8-12 oz. per 1,000 sq. ft. Apply after casing and give 2 further dustings between breaks. Alternatively use 4 oz. per 1,000 sq. ft. for regular weekly applications.

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Published by the Mushroom Growers' Association, Agriculture House, 25-31 Knightsbridge, London, S.W.1 and printed by W. S. Maney & Son Ltd., Russell Street, Leeds 1